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13. ABSTRACT *(Maximum 200 words)*

A utilization review and analysis was conducted for referrals from PRIMUS clinics to the Internal Medicine Clinic at Darnall Hospital from 1 April to 30 September 1993. Actual costs for 206 referrals to both Darnall Hospital and CHAMPUS were calculated. The study found that Darnall Hospital provided needed referral services in a more cost-effective manner than standard CHAMPUS. However, partnership physicians provided needed medical care at a substantially lower cost to Darnall Hospital with no copayment to the patient. The study reported that Internal Medicine Clinic physicians spend a relatively small portion of their reported working time in the outpatient clinic. Conversely, nurse practitioners report a higher number of working hours and significantly higher levels of productivity than their physician counterparts. Recommendations include reducing appointment length, improving the no-show fill rate, changing duty locations for Internal Medicine Clinic physicians so that they treat more patients in the outpatient clinic.

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U. S. ARMY - BAYLOR UNIVERSITY

GRADUATE PROGRAM IN HEALTH CARE ADMINISTRATION

A UTILIZATION REVIEW AND ANALYSIS OF NONURGENT PRIMUS REFERRALS TO THE DARNALL ARMY COMMUNITY HOSPITAL INTERNAL MEDICINE CLINIC

A

GRADUATE MANAGEMENT PROJECT

BY

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FORT HOOD, TEXAS

MAY 1994

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ABSTRACT

The purpose of this Graduate Management Project was to conduct a utilization review and analysis of the referral process for PRIMUS patients referred to the Darnall Hospital Internal Medicine Clinic during the period 1 April 1993 to 30 September 1993. The Graduate Management Project compared the actual costs for 206 PRIMUS patients referred to both standard CHAMPUS providers and partnership providers who negotiate a reduced reimbursement fee for care provided. The study found that Darnall Hospital provided needed referral services in a more cost-effective manner than standard CHAMPUS. However, the partnership physicians provided needed health care referral services at a substantially lower cost to Darnall Hospital with no copayment to the patient.

Copayments for standard CHAMPUS provider services were remarkably high and appear to have a significant impact upon a patient's decision to pursue civilian referral health care through standard CHAMPUS providers.

Internal Medicine Clinic physicians reported significant hours worked during the time period studied. However, the data demonstrate that a very small proportion of their time is spent treating appointed patients in the clinic. Conversely, nurse practitioners report a higher number of working hours and continuously demonstrated significantly higher levels of productivity than their physician counterparts.

The templated appointment system appears to provide more than ample time to conduct several types of appointments. Although some appointments require a set amount of time (as in a treadmill test), many appointments can be changed to reflect a more realistic appointment system with the large workload and waiting list evident in the Internal Medicine Clinic.

Arguably the most cost-effective means to provide needed health care services for patients referred from a PRIMUS clinic is to improve both the appointment system and the no-show rate. The additional cost in supplies and ancillary services is nominal when compared to the cost of physicians' time when they are not treating a patient.

Recommendations were made to improve the patient appointment system, the physician scheduling system, and the no-show protocols as a means to improve health care productivity in the Internal Medicine Clinic.

ACKNOWLEDGEMENTS

There are several people and departments for which I would like to thank for their assistance in completing this project, for without their help and guidance, this project would not have been completed.

I would like to thank Major Anna Walsh and the staff of the Coordinated Care Division at Darnall Hospital. They were instrumental in assisting me with information on the Army's Coordinated Care Program and the PRIMUS initiative. They were always helpful and willing to answer or research the questions I continually posed for them.

In particular, I would like to thank Stephanie Laird for her detailed, extensive efforts to glean information from the sometimes finicky MASS system. She took the time to extract enormous amounts of details from that system and took the time to both explain the information and provide emotional support to me when the weight of this project seemed to be too much.

I would also like to thank my preceptor, Colonel John Vigna, for his mentorship and support during my residency year. His sense of humor helped me keep my perspective, and part of me is convinced that I would not have finished this project had it not been for him constantly pushing me to complete it!

Finally, I would like to thank my husband, Lanny Ray, for all his love for and support of me while I puruse my goal of completing a Master degree in Health Care Administration. I hope that I can be the same support for him while he competes his schooling as he has been for me.

LIST OF ABBREVIATIONS

AR	Army Regulation
BAMC	Brooke Army Medical Center
CCD	Coordinated Care Division
CCU	Critical Care Unit
CHAMPUS	Civilian Health and Medical Program of the United States
CSD	Clinical Support Division
DA	Department of the Army
DoD	Department of Defense
HCF	Health Care Finder
MASS	Medical Analysis Support System
MEPM	Medical Expense Performance Module
MEPRS	Medical Expense Performance Reporting System
MTF	Medical Treatment Facility
NHP	Non-physician Health Care Professional
OB/GYN	Obstetrics and Gynecology
PA	Physician Assistant
PPN	Preferred Provider Network
PRIMUS	Primary Care for the Uniformed Services
TRIPAS	Triservices Patient Appointment System
UCAPERS	Uniform Chart of Accounts for Personnel

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INTRODUCTION

Health Care in the United States Today

Health care costs are rising at an alarming rate. Rapid medical technological advances, state and federal legislation, various health care delivery systems, unending patient demand, and somewhat unrealistic expectations have all impacted upon the delivery and cost of providing health care in the United States. Studies indicate that the annual cost of health care expenditures in the United States is increasing at three times the rate of the Consumer Price Index (Brooke 1993). It has been estimated that by the year 2000 the United States will spend $1.7 trillion, or over 18% of the Gross National Product, on health care (Ernst and Young 1992).

Health Care in the United States Military

The Department of Defense (DoD) is not exempt from rising health care costs. In the past, military medical treatment facility (MTF) commanders were budgeted for their hospital operations based on workload, offering little incentive to operate efficiently. The U. S. Army Health Services Command could no longer tolerate the cost of continuing business in that manner.

In October 1991, the Deputy Secretary of Defense stated the need to take aggressive actions in order to execute its medical mission - "To provide, and maintain readiness to provide, medical services and support to the armed forces during military operations and to provide medical services and support to members

of the armed forces, their dependents, and others entitled to DOD medical care" (DoD 1991).

Furthermore, the Deputy Secretary of Defense directed the Assistant Secretary of Defense for Health Affairs to implement a program "To ensure coordination within appropriate geographical areas of the provision of medical care in DoD facilities with the provision of medical care through the Civilian Health and Medical Program of the Uniformed Services" (CHAMPUS). The objective of this program is to "Maximize cost-effectiveness in the delivery of high-quality health care in the accomplishment of the Department's medical mission" (DoD 1991).

Prior to this, the military MTF commander had been responsible for managing all health care services provided within the MTF to any beneficiary who presented for health care services. If the needed health care services were unavailable, the military MTF referred the health care beneficiary to a civilian health care provider who was reimbursed under standard CHAMPUS, or to another military MTF which had the capability and capacity to treat the patient (Canestrini 1992).

Budget and Health Care Reform Initiatives

The Department of Defense and the United States Army have been at the forefront of health care cost containment with pilot programs such as Gateway to Care and CHAMPUS reform initiatives. In addition, the paradigm shift in the budgetary process for Department of the Army from a workload-based to a capitated-based budget mandates that commanders and health care administrators

aggressively determine the best utilization of limited health care funds.

Military Personnel and Fiscal Issues

The drawdown of military personnel and severe budget cuts have subsequently decreased the funds available for a military MTF to operate a complete health care service system for both its capitated population and other eligible beneficiaries who, though not counted as part of the capitated population, use the military MTF health care system.

While other military installations are reducing their mission and active duty personnel numbers, III Corps and Fort Hood is growing. According to projections through FY 96, Fort Hood's active duty population will grow from 42,498 in FY 93 to 45,205 in FY 96. Additionally, the active duty family member population is also expected to grow from 63,943 in FY 93 to 68,015 by FY 96 (U. S. Army Health Services Command 1993b).

Darnall Hospital's catchment area population is growing as well. In FY 93, the total beneficiary catchment area population was 135,864. The FY 96 end population is expected to be 142,995 (U. S. Army Health Services Command 1993b).

Making matters worse is the fact that Department of the Army (DA) MTFs have a $400 million decrement in FY 1994. Darnall Army Community Hospital's (hereafter referred to as Darnall Hospital) portion of that decrement is $5.341 million (U. S. Army Health Services Command 1993b). This decrement compels Darnall Hospital to assess its entire health care services operation and to make its health care services system as cost-effective as possible.

Darnall Army Community Hospital Initiatives

According to MG Richard D. Cameron, Commander, U. S. Army Health Services Command, CHAMPUS recapture initiatives have, in the aggregate, saved two dollars for every dollar invested. In addition, the best results in cost savings occur when the military MTF is fully responsible for and in control of its health care resources (U. S. Army Health Services Command 1993a). Through aggressive coordinated care initiatives, Darnall Hospital has experienced substantial savings. In several areas, such as inpatient and outpatient psychiatric services and obstetrical and gynecologic (OB/GYN) services, these initiatives provided a total cost savings of $3,557,225 in fiscal year 1993 (Walsh 1993).

CONDITIONS WHICH PROMPTED THE STUDY

PRIMUS Clinics

In response to the increasing beneficiary population and its high demand for primary health care services, Darnall Hospital contracted with JSA Healthcare Corporation in April 1993 to provide primary, family practice-based health care services to eligible beneficiaries at two Primary Care for the Uniformed Services (PRIMUS) health clinics. The two clinics are located in Killeen and Copperas Cove, towns adjacent to the Fort Hood military reservation.

The PRIMUS contract provides for ambulatory, family practice-based health care services primarily on a walk-in basis for beneficiaries entitled to care under Army Regulation (AR)

40-3. Active duty soldiers are not eligible for treatment in the PRIMUS clinics. The scope of PRIMUS services provided to the enrolled population includes appropriate medical, nursing, laboratory, radiographic, and pharmacy services required for the patient's acute or chronic medical condition. The PRIMUS clinics are the patient's primary care entry point into the military health service system. PRIMUS serves as the Primary Care Managers for each enrollee (Statement of Work 1993).

At least sixty percent of all physicians working in the PRIMUS clinic must be certified in a primary care specialty such as general medicine, family practice, emergency medicine, internal medicine, OB/GYN, and/or pediatrics (Statement of Work 1993).

The PRIMUS clinics employ Physician Assistants and Nurse Practitioners provided they are fully accredited, certified, licensed, and supervised in accordance with the laws of the state of Texas (Statement of Work 1993).

Darnall Hospital provides payment to JSA Healthcare Corporation on a capitated basis per member per month. The maximum number of enrollees permitted for JSA Healthcare Corporation is 58,000; 30,000 for the Killeen PRIMUS and 28,000 for the Copperas Cove PRIMUS (Adoue-Polk 1993). Patients enrolled in PRIMUS whose nonemergent medical condition requires the attention of a medical specialist or further evaluation that PRIMUS health care professionals are unable to provide must be referred to a Darnall Hospital Health Care Finder (HCF). The HCF will obtain a medical specialist consultation in the most cost-

effective manner possible. The first choice is to utilize health care providers at Darnall Hospital. The second choice is to find an appropriate referral provider at another federal facility or through the Preferred Provider Network (PPN). The last choice is to refer the patient out on standard CHAMPUS (U. S. Army Health Services Command 1993c). This maximizes use of the least expensive military health service system and thus reduces overall health care costs.

Army Regulation 40-3 and Gateway to Care Guidance

Army Regulation 40-3 states that when an MTF commander must deny medical care to persons eligible for care at the MTF due to a lack of capability to provide that service, the priority system shall be implemented. This system is described in Table 1. To ensure priority care for active duty members, AR 40-3 states that "All clinics will reserve specified hours for examination and treatment of these members" (AR 40-3 1985). Family members of active duty personnel, retirees, and family members of retirees may receive care as facilities and staffing permit.

From the Chief of Clinical Support Division (CSD), I discovered that the Internal Medicine service at Darnall Hospital routinely refuses to review referrals and treat patients who are referred from the PRIMUS clinics servicing our beneficiary population. Additionally, some patients being examined and followed for internal medicine problems are in a lower priority category than those who are being denied referral treatment. Specifically, some retirees and dependents of retirees are being examined and treated by Darnall Hospital internal medicine

TABLE 1
Priorities for Care

Priority	Category	Authority and degree of entitlement
1	A. Members of the uniformed services on active duty (including ADT) and comparable personnel of North Atlantic Treaty Organization (NATO) nations listed in paragraph 4-23.	Complete and unqualified for US personnel. For NATO personnel, as stated in paragraph 4-23 and appendix B.
	B. Members on the Temporary Disability Retired List (TDRL) for periodic medical examinations. (Priority 4 for other care.)	Required periodic medical examinations must be provided [10 USC 1012(a)].
	C. Members of the Reserve Components not on active duty.	Care must be provided for conditions contracted in line of duty during a period of active duty (AD), including ADT, or while traveling to or from such duty or for injuries suffered while performing inactive duty training (10 USC 3721-3722).
	D. Members of the Citizens Military Training Corps (CTMC) (10 USC 3722).	Care must be provided for conditions contracted while traveling to, from, or during attendance at CMTC camps.
	E. DA civilian employees exposed to health hazards in their work. (Priority 5 for other occupational health services).	Medical examinations must be provided when required by the Occupational Safety and Health Administration (OSHA) to determine whether the health of the employee is adversely affected by the hazards [5 USC 7902; 29 USC 655(b) (7)].

(Source: Department of the Army Regulation 40-3 dated 15 February 1985)

TABLE 1
Priorities for Care

Priority	Category	Authority and degree of entitlement
2	Dependents of active duty members of uniformed services, dependents of persons who died while in such a status, and dependents of active duty members of the NATO nations who meet the conditions prescribed by the NATO Status of Forces Agreement (SOFA), paragraph 4-23a(1).	Care must be provided when facilities and staffing permit (10 USC 1076(a) for US dependents and the NATO SOFA for NATO dependents).
3	Members of the Senior Reserve Officers' Training Corps of the Armed Forces.	Care may be provided when it is required during periods of attendance at training camps (10 USC 2109).
4	Retired members of the uniformed services, their dependents, and the dependents of deceased retired members.	Care may be provided when facilities and staffing permit [10 USC 1074(b) and 1076(b)].
5	Civilian employees of the Federal Government under the limited circumstances covered by the Federal Employees/Health Service Program (see AR 40-5).	Care may be provided when facilities and staffing permit (5 USC 7901).
6	All others.	Care may be provided when facilities and staffing permit.

(Source: Department of the Army Regulation 40-3 dated 15 February 1985)

physicians, while many active duty family members are being referred to standard CHAMPUS for evaluation and treatment (Murdock 1993).

Statement of the Problem

The Internal Medicine Clinic's refusal to accept referrals from the PRIMUS clinics has resulted in increased utilization of the more expensive CHAMPUS program and is in contravention of AR 40-3 and Gateway to Care guidance.

Literature Review

Capitation

Military health care is provided under a capitated system. Capitation refers to a fee rate per health care beneficiary per unit of time that is independent from their utilization of health care services (Payson 1989). Productivity may be defined as the total number of patients seen per hour; the appointment fill ratio; and the patient waiting times (Greenfield 1989). In order to achieve maximum productivity under this type of system, two components must be present: (1) Resources must be appropriately utilized for the patient's medical condition, and (2) costs per unit of service must be controlled (Payson 1989).

Cost Sharing

A study conducted by Cherkin, Grothaus, and Wagner (1989) of 52,047 state and federal employees enrolled in a staff model health maintenance organization (HMO) during a two-year period found an immediate and continuous decrease (10.9% fewer primary care visits) in primary health care utilization with the introduction of a $5.00 copayment on outpatient visits. The copayment amount was approximately 15% of the typical charge for a primary care physician office visit. This effect was similar

for enrollees who had from no visits to several (up to nine) visits in the year preceding the study.

In the military health care setting, beneficiaries have no cost sharing mechanisms found in many civilian managed care organizations such as coinsurance, deductibles, and copayments, and may therefore have a tendency to overuse the health care service system. Therefore, the military health care system must be able to deal with some ambulatory overutilization (Payson 1989). Because of this phenomenon, management of the health care entry point is the most critical function in order to achieve acceptable levels of productivity within this system (Payson 1989).

Although management of the health care entry point can serve as a way to control access into the health care system, it has been noted that there is little to be gained by health care providers who attempt to improve productivity in a capitated system by decreasing, or even denying, access to patients. In fact, it can be argued that the incremental cost of a short clinic visit is nominal when compared to the potential cost of a delayed or missed diagnosis, or the risk to the physician's reputation (Payson 1989). Therefore, it is imperative that the cost of health care is not the overriding factor in determining a patient's medical treatment.

Fee-For Visit Versus Salaried Staff

Since military physicians are salaried staff whose income is not tied to productivity, there is little economic incentive to increase their work effort and productivity beyond some arbitrary

or minimally accepted standard. A 1978 study by Bobula found that weekly physician productivity (measured in both the hours worked per week and the number of patients seen per hour) was lower for salaried family practitioners, internists, and pediatricians than is was for self-employed physicians who were compensated on a fee-for-service basis (Hurdle and Pope 1989a).

Appointment Management

Effective management of a health care system's current capabilities and resources is vital to its success. Efficient capacity management must assemble and employ the staff, equipment, and available facilities to meet health care service demand. Two strategies exist to manage health care service capacity. The first approach involves smoothing patient demand for health care services. This allows for greater use of a relatively constant service capacity. The second approach involves matching existing patterns of demand for health care services to the supply of available services (Antle and Reid 1988).

Demand-smoothing strategies involve redirecting patient arrival times to "coincide with the organization's planned processing capabilities". An effective appointment system can be used to regulate health care services for known patients. Time series analysis for walk-in patients' arrival times by day may help to forecast the unscheduled demand for health care services (Antle and Reid 1988). Hospitals are now using a number of techniques to estimate demand. These well-developed techniques include population flow and causal models, survey data, expert

judgment, historical data, and standards developed by major health care organizations such as the American Hospital Association (Vogel 1989). Health care managers are then able to adjust the number of scheduled (known) patient appointments to meet forecasted (unknown) unscheduled patients. This system reduces patient congestion and "smoothes" the patient arrival rate, thus decreasing average waiting times (Antle and Reid 1988).

Supply-matching strategies use effective staff scheduling to accommodate existing patient demand. However, this practice is dependent upon the health care manager's ability to anticipate patient demand for health care services and to garner qualified personnel to perform those services (Antle and Reid 1989). For example, military sick-call may present some problems by causing longer and more unpredictable waiting times for other patients (Brandler 1983). Two strategies include staggered duty hours and the use of part-time health care providers which can effectively match staffing needs to expected variations in demand for health care services (Antle and Reid 1988).

Analyzing appointment types and allotted appointment time is one of the first steps in setting a health care service's productivity standards (Greenfield 1989). The total number of medical appointments available is a direct reflection of the health care staff availability and productivity (Brandler 1983). In any medical specialty, appointment types fall into one of three categories: Short initial or follow-up appointments, consultations, or procedures. Short appointments can be allotted

15 minutes and consultations may be allotted 30 minutes. Procedures can differ significantly and should be negotiated with the medical service's physicians (Greenfield 1989).

In primary care models such as internal medicine, a 15-minute matrix may be constructed. The appointment type mix must be analyzed to ensure that it mirrors the patient mix. Assuming that all appointments are filled, a reasonable objective for internal medicine physicians is 3.5 patients per hour. After the analysis has been completed, appointment clerks should be allowed to convert longer appointments (i.e., 30 minutes) to two shorter (15 minutes) appointments if the appointment is unfilled or cancelled shortly before the appointment date. This system helps prevent large blocks of time from going unfilled (Greenfield 1989).

In addition, it is vital to analyze the mix of urgent, walk-in, and no-show appointments in order to organize staffing into a more efficient health service operation. Depending on the patient mix, it may be more efficient to assign urgent and walk-in patients to a walk-in physician (Greenfield 1989). Using only the number of patient visits as a measure of productivity ignores the variation in the patient mix. Some physicians with less but more intensive visits may falsely appear to be less productive if only visits were used (Hurdle and Pope 1989a). One study found that most physician productivity decline was due to fewer patient visits per hour rather than lower work effort (Hurdle and Pope 1989b).

Finally, medical appointment availability also depends upon other factors, such as activities that prevent providers from seeing patients and clinic hours. These factors must be considered when looking at both access and physician productivity (Brandler 1983).

Figure 1 demonstrates how to analyze certain parameters in order to make modifications to staffing levels.

Productivity	**Appointment Fill Ratio**	**Wait Time**	**Action**
High	High	Low	Do Nothing
High	High	High	Add staff
Low	Low	Low	Double book appointments
Low	Low	Low	Decrease staff
Low	High	High	Change appointment mix

(Greenfield 1989)

Fig. 1. Staff level matrix.

Another type of scheduling which reflects the way that patients "flow" into the health care system is called the "modified wave". It is based on the average number of patients a physician can see in one hours' time, the number of examining rooms available, and the importance of scheduling patients within the first 30 to 40 minutes of every hour. The physician is afforded time at the end of each hour to catch up so that patients waiting at the beginning of the next hour will be seen and treated immediately. It is often noted that after this type of appointment system is put into place, the physician is able to see one to two more patients per hour without changing the way

that the physician provides care, resulting in higher productivity (Willis and Bristow year unknown).

Use of Non-Physician Health Care Providers

Since the early 1970's non-physician health care providers such as nurse practitioners and physician assistants have been used as substitutes for physicians for routine and primary ambulatory care. In 1975, Reinhardt found that significant productivity gains could be made by the greater use of non-physician health care providers (Hurdle and Pope 1989a). Non-physician health care professionals (NHPs) provide high-quality primary care and increase access to medical care services, often in areas where physician care is unavailable. Record concluded in 1979 that 75% to 80% of adult primary health care services could be delegated to physician extenders (Hurdle and Pope 1989a). In 1980 Record et. al. derived a ratio that substitutes one NHP for 63% of a medical physician. They further concluded that (1) NHP output equals physician output when case mix and delivery context are equal; (2) NHPs are more productive than physicians when they handle all delegable outpatient visits; and (3) physician productivity decreases by 26 percent when they treat patients with complex medical problems (Poirier-Elliott 1984).

Several studies indicate that physician assistants can increase a physician's productivity level by 50% or more. A 1983 Rand Corporation study entitled "Costs, Productivity and the Utilization of Physician Extenders in Air Force Primary Medicine Clinics" found that a physician assistant could substitute for a

physician on a 1:1 basis and handle eighty to ninety percent of presenting patients' medical problems. Additionally, a report by the American Medical Association in 1982 concluded that physician medical office practices that employ physician assistants treat a larger number of patients at a lower fee-for-service cost (Cyr 1985).

A study conducted at an Air Force Medical Clinic found that the physician lost two patient visits per day due to consulting with the physician assistant. However, the physician assistant saw 89.6% as many patients as the physician, which resulted in a net increase in patient visits of 80.1%. The study also found that patient acceptance and satisfaction of physician assistant medical care was high, patient requests to be examined by the PA were high, and the PA's "no-show" rate was estimated at 3% or less (Cyr 1985).

Several studies found that productivity improvements through task delegation could significantly lower medical care costs. In 1983, Denton, Gafni, Spencer, et. al. concluded that the savings realized from the widespread use of NHPs would be 10% to 15% of all Canadian medical costs, and 16% to 24% of the total ambulatory health care costs (Hurdle and Pope 1989a).

Purpose of the Study

The purpose of this Graduate Management Project is to conduct a utilization review and analysis of the referral process for PRIMUS patients referred to the Darnall Hospital Internal Medicine Clinic during the period 1 April 1993 to 30 September 1993. This period begins when the current PRIMUS contract was

implemented and extends through the end of the fiscal year. The Graduate Management Project will compare the actual costs for PRIMUS patients referred to CHAMPUS providers, the expected costs if all the PRIMUS referral patients had been seen by contracted partnership providers in the Internal Medicine Clinic, and the expected increase in health care provider productivity if improvements in scheduling, appointment allotment time, and health care provider utilization were implemented.

Factors that impact upon the total cost of Internal Medicine Clinic referrals from PRIMUS include the availability of Internal Medicine physicians, the number of appointments available, the amount of time allotted per appointment, the number of failed appointments, and the number and availability of non-physician health care professionals.

METHODS AND PROCEDURES

Cost/Benefit Analysis

(1) Identifying Referrals

The Darnall Hospital Coordinated Care Division Health Care Finder (HCF) database was queried to identify all PRIMUS patients who were referred to the HCF system for internal medicine problems from April to September 1993. Information gathered on all identified patients included name, sponsor's Social Security number, priority category and status, medical problem, date of referral, date referral was sent to the HCF, and the date and disposition of the referral [Brooke Army Medical Center (BAMC) or Darnall Hospital appointment, CHAMPUS, or other). Patient

referrals were separated by priority category (categories 2 and 4) and disposition of the patient referral. Patients' names and Social Security numbers were used only for the purpose of identifying their appointment status and/or CHAMPUS payment claims. Patient confidentiality and privacy were maintained at all times.

(2) Triservices Patient Appointment System (TRIPAS)

The TRIPAS computerized patient appointment system was analyzed for patients who received a referral appointment at the Darnall Hospital Internal Medicine Clinic to determine the number and type of appointments they received during the six month time period for their referred medical condition.

(3) MEPRS database

The Medical Expense Performance and Reporting System (MEPRS) cost accounting system is comprised of three main elements: 1) Workload data, 2) personnel utilization data, and 3) expense data (Carstensen 1991).

Correct and accurate reporting of workload data, such as patient admissions, occupied bed days, outpatient visits, and health care procedures performed, justifies budgetary and manpower requirements to staff a section or service (Carstensen 1991).

Accurate cost distribution of the salaries of both military and civilian health care and ancillary personnel assigned to a section or service and correct reporting of available hours is vital to the MEPRS cost accounting system. Personnel costs are computed by the Medical Expense Performance Module (MEPM), which

produces salary costs and full-time-equivalent reports for each MEPRS code by several criteria: The employees' status (i.e., military, civilian, volunteer) and personnel category (i.e., registered nurse, paraprofessional, administrative, etc.)(Carstensen 1991).

Expense data are collected via computerized finance and accounting reports and manually computed worksheets. All costs involved in operating the health care facility, to include salaries, services, utilities, equipment, contractual services, travel, depreciation, and non-reimbursable support, are used to compute total expenses (Carstensen 1991).

The MEPRS cost accounting system was examined to determine the average cost for an Internal Medicine Clinic outpatient visit (MEPRS code BAA) during the fiscal year ending 30 September 1993. Table 2 on page 20 denotes the breakdown for ancillary services, supplies, contracts, support, and manpower costs. The average cost for an Internal Medicine Clinic outpatient visit for FY 1993 is $92.42. This amount is the cost per visit to which CHAMPUS charges will be compared.

(4) Medical Analysis Support System

The Medical Analysis Support System (MASS) was queried for CHAMPUS claims made by any of the 157 patients referred to CHAMPUS providers for their referred medical condition. Costs for all services provided for one visit were separated into two sections: 1) Government Paid Professional Services, or the CHAMPUS cost to Darnall Hospital, and 2) Amount Patient Paid

TABLE 2

Medical Expense Performance Reporting System (MEPRS)
Internal Medicine Clinic FY 1993

MEPR Code	Ancillary Service	Operating Costs Internal Medicine (BAAA)
	ANCILLARY COSTS:	
DAA	Pharmacy	$833151
DBA	Pathology	252388
DBB	Anatomic Pathology	4417
DBC	Blood transportation	270
DCA	X-ray	193702
DDA	EKG	54316
DDB	EEG	859
DEA	CSS	50
DHA	Inhalation Therapy	235
DIA	Nuclear Medicine	164109
Total Ancillary Costs		$1519107
	SUPPORT COSTS:	
EAB	Operational Depreciation	$29072
EBA	Command	28097
EBB	Specialty Staff	7123
EBC	Administrative	29832
EBD	Clinical Management	79462
EBE	Graduate Medical Education	14203
EBF	Education and Training	5797
EBH	Third Party Collection	8229
EC	Support Services	1863
EDB	Operation of Utilities	8441
EDC	Maintenance of Real Property	1642
EDD	Minor Construction	34
EDE	Other Engineering Support	5
EDH	Fire Protection	1455
EDI	Police Protection	3176
EDJ	Communications	1323
EDK	Other MTF Support Services	6275
EEA	Logistics	7326
EFA	Housekeeping In-house	945
EFB	Housekeeping Contract	32314
EGA	BMER	17134
EHA	Linen In-house	270
EKA	Ambulatory Care Administration	66889
Total Support Cost		$350907
Total Cost		$2910428
Total Visits		31490
Unit Cost per Visit		**$92.42**

(Source: Darnall Army Community Hospital Medical Expense Performance Reporting System for Fiscal Year 1993)

Professional Services, or the copayment/deductible paid by the patient. Only visits that occurred during the six month time period were included in the study. Additionally, patients referred to partnership physicians (physicians who accept CHAMPUS eligible patients and agree to a reduced amount of the CHAMPUS allowable charge for medical care) were identified. The patient does not pay a copayment for these services.

(5) Total Cost and Average Cost per Visit

A cost/benefit analysis was conducted for active duty family members (priority 2) and retirees and dependents of living or deceased retirees (priority 4) separately. Each patient was grouped by their disposition location (BAMC, Darnall Hospital, or CHAMPUS). The number of visits and the cost per visit (as a cost to Darnall Hospital or a copayment cost to the patient) were used to determine an average cost per visit and average copayment per visit to determine the most cost-effective means to provide referral services.

(6) Assumptions

For purposes of this study, the terms "Visit" and "Appointment" refer to an episode of care which may include, but is not limited to, a health care provider examination, diagnostic services, laboratory services, radiologic services, treatments, and (for Darnall Hospital and BAMC patients) pharmaceutical products. Telephone consultations conducted by health care providers in the Internal Medicine Clinic count as visits for purposes of accounting for workload. Arguably they are less costly than an actual outpatient clinic visit; however, the MEPRS

cost accounting system is presently incapable of determining the different costs for telephone consults and outpatient visits to the Internal Medicine Clinic. Therefore, telephone consults are counted as one visit each, and therefore, the number of telephone consults directly impacts upon the MEPRS cost per visit.

It is not known how many patients may possess additional health care insurance and pursued their referral without making a CHAMPUS claim. Since this information cannot be ascertained, and because Darnall Hospital is unaffected financially by these actions, this possibility was not pursued in this study.

Utilization Review and Analysis - Health Care Providers

(1) Medical Clinic Total Visits

The number of Internal Medicine Clinic outpatient visits for the six month time period were gathered from the TRIPAS database to determine the percentage of active duty (priority 1), family member (priority 2) and retiree/family member of living or deceased retirees (priority 4) treated in the Internal Medicine Clinic. Patients treated for other medical conditions not identified as outpatient Internal Medicine Clinic visits were placed into the "Other" category. The total number of "Other" visits was 8 and account for less than 0.01% of all Internal Medicine Clinic visits. Additionally, outpatient visits to the Internal Medicine Clinic by patients categoried as priority 3, 5, or 6, are generally ineligible for CHAMPUS reimbursement. These visits totaled 13 cases and account for less than 0.01% of all Internal Medicine Clinic visits. For purposes of this study, categories 3, 5, 6, and "Others" were excluded. Table 6 (p. 32)

shows the complete number of outpatient visits each month by patient category.

(2) Internal Medicine Clinic No-Show Rate

The no-show rate for each month is listed in Table 7 (p. 33). No-show rates are generally reported to the hospital command group as the number of appointments missed divided by the total number of patient visits. However, the term "No-show" implies that the patient first had an appointment for an outpatient visit to the Internal Medicine Clinic. In order to determine the true no-show rate per month for the Internal Medicine Clinic, telephone consults and walk-in patients were excluded from the total number of visits. The result was the total number of appointed patients. The no-show rate was calculated by dividing the number of no-shows by the number of appointed patients.

(3) Health Care Provider Productivity Workload

The TRIPAS Patient Appointment System was queried to determine the number of patient appointments conducted by appointment type. Figure 2 (p. 34) denotes the types of appointments and its respective code.

Each health care provider's template schedule was analyzed to annotate the amount of time scheduled for each appointment type. It is important to note that allotted appointment times for same appointment types vary for some providers.

The total number of hours each health care provider worked on outpatient clinic visits was calculated by multiplying the number of each type of appointment by the amount of time allowed

for that type of appointment. Health care providers' workload is annotated in Appendix A, Tables 8 through 22 (pp. 48-62).

(4) Health Care Provider Reported Hours

The Uniform Chart of Accounts for Personnel (UCAPERS) was used to annotate the total amount of time each health care provider worked each month during the six month time period. Each health care provider is identified by the type of provider only as a means to protect the provider's privacy. The workload reflects clinic, ward (or inpatient), administrative, and on-call time. Reported workload for physicians is shown in Appendix B, Tables 23 through 26 (pp. 63-66). Reported workload for nurse practitioners is shown in Appendix C, Table 27 (p. 67).

(5) Health Care Provider Schedules

Health care provider schedules were examined to determine the number of clinic, ward, and walk-in physicians are available on a daily basis for the Internal Medicine Clinic during the six month time period. Only physician schedules were examined, as nurse practitioners generally treat patients exclusively within the Internal Medicine Clinic.

(6) Utilization Review and Analysis

A comparison of health care provider clinic time, workload, and work schedules was conducted to determine the appropriateness and effectiveness of the patient referral and appointment system in the Internal Medicine Clinic. Through this analysis, recommendations will be made to improve clinic and provider operations to improve productivity and improve access to patients referred to the Internal Medicine Clinic.

(7) Assumptions

An assumption is made that scheduled appointments that were conducted equal productive time spent. For example, it is assumed that a 60 minute appointment equates to 60 minutes of provider productivity.

FINDINGS

(1) Referrals

Two hundred forty-six patients were referred to the HCFs in the Coordinated Care Division at Darnall Hospital from one of the two PRIMUS clinics for Internal Medicine from 1 April 1993 to 30 September 1993. This time period coincides with the first six months of the second generation PRIMUS clinic contract with JSA Corporation.

Of the 246 referrals, twelve were patients were eligible for medical care at Darnall Hospital but were informed that the Internal Medicine Clinic did not have the appointment capacity to provide them a referral appointment. Additionally, these twelve patients were Medicare eligible, and therefore ineligible for CHAMPUS reimbursement. Since public law does not allow military hospitals to be reimbursed by Medicare for medical services provided to beneficiaries who are also eligible for Medicare health care insurance, and since Darnall Hospital does not pay Medicare claims, these referrals were excluded from the study.

Additionally, the following referrals provided insufficient evidence to support either Darnall Hospital Internal Medicine Clinic appointments or CHAMPUS reimbursed appointments and were therefore excluded from the study: Five referral patients were

not on file in the TRIPAS appointment system. Ten patients were referred for Cardiology services. Four patients were referred for Gastroenterology services. Four patients had referral appointments scheduled on the HCF database, but their TRIPAS appointment record showed no scheduled appointments for their referral problem. One referral patient cancelled his appointment. One referral patient's appointment was booked after the 6 month time period. One patient was not eligible for military health care according to the Defense Eligibility

TABLE 3
Patients Referred to Darnall Hospital
Internal Medicine Clinic from PRIMUS Clinics
April 1993 to September 1993

Total Number Referred to HCF: 246

Number	Reason for Exclusion
12	No appointment booked in IMC; patient Medicare, not CHAMPUS eligible
5	Not on file in TRIPAS
10	Patient referred to Cardiology service
4	Patient referred to Gastroenterology service
4	HCF showed referral appointment in IMC but no appointment in TRIPAS for referred problem
1	Patient cancelled referral
1	Referral appointment booked after September 1993
1	Patient DEERS ineligible
1	Patient CHAMPUS ineligible
1	Patient already IMC patient

Total number of referrals available for study: 206

(Source: Coordinated Care Division, Darnall U.S. Army Hospital, Fort Hood, Texas 1994)

Enrollment System (DEERS) database. One patient was not eligible for CHAMPUS reimbursement. Finally, one referral patient was

already being treated for other medical problems in the Internal Medicine Clinic. The final number of referrals used in the study was 206. A summary of the final number of referral patients is in Table 3 (p. 26).

(2) DACH/CHAMPUS Costs for Priority 2 Patients

Of the 206 referral patients, 35 (17% of all referrals used in this study) were active duty servicemember dependents (priority 2, Table 1) and 171 (83%) were service member retirees or dependents of retired or deceased retired servicemembers (priority 4, Table 1).

Four of the 35 active duty dependents (11.5% of all active duty dependents referred) were referred to BAMC for medical treatment. There is no direct cost to Darnall Hospital for patients who receive referral treatment at BAMC. Six referrals (17%) were given medical appointments at the Darnall Hospital Internal Medicine Clinic. The number of appointments during the six month time period scheduled to treat the patient's referred medical condition ranged from one to three appointments per patient. A total of 13 appointments were scheduled and completed for the six patients at a total cost of $1201.46. The average cost of each appointment per MEPRS FY 1993 data (Table 2) is $92.42. There is no copayment or deductible involved for patients receiving medical care at Darnall Hospital.

Twenty-five active duty dependents (71.5%) were informed that they could not obtain a medical appointment at Darnall Hospital and were referred to CHAMPUS providers. Of the 25 referred to CHAMPUS, 21 (or 84% of CHAMPUS referrals for active

duty dependents) did not seek medical care for their referred medical condition during the six month period. Four patients (16%) made from two to three medical appointments during the six month period for their medical conditions for a total of nine appointments with the cost per appointment ranging from $15.00 to $4714.96 and copayments per appointment ranging from $103.91 to $1721.64. The nine medical appointments reimbursed by CHAMPUS during the six month period totaled $5252.76, or an average cost of $583.64 per appointment. Copayments for the nine medical appointments totaled $2183.90, or an average cost of $242.66 per appointment.

However, one patient with three CHAMPUS reimbursed medical appointments at a total cost of $4714.96 with a copayment of

TABLE 4

Active Duty Dependent (Priority 2) Referrals

Number	Type	Visits	Total Cost	Average Cost	Total Copay	Average Copay
4	BAMC	*	$ 0.00	$ 0.00	$ 0.00	$ 0.00
6	Darnall	13	$1201.46	$ 92.42	$ 0.00	$ 0.00
25	CHAMPUS:					
		21 with no appointments				
4	Standard	9**	$5252.76	$ 583.64	$2183.90	$ 242.66
3	Standard	6**	$ 537.80	$ 89.63	$ 462.26	$ 77.04

* = Unknown number of BAMC appointments.
** = Four patients (9 appointments) with outlier inclusive;
Three patients (6 appointments) with outlier exclusive.

(Source: Triservice Patient Appointment System and Medical Analysis Support System, Darnall U.S. Army Hospital, Fort Hood, Texas 1994)

$1721.64 seemed to skew the results. If this outlier is omitted, then the six remaining CHAMPUS reimbursed appointments totaled $527.80, or an average cost of $89.63 per appointment. Copayments for the six remaining appointments totaled $462.26, or an average copayment of $77.04 per appointment. The results are shown in Table 4 (p. 28).

(3) DACH/CHAMPUS Costs for Priority 4 Patients

Ten of the 171 retirees/dependents of retirees or deceased retirees (6% of all priority 4 patients) were referred to BAMC for medical treatment. Twenty-nine referrals (17%) were given medical appointments at the Darnall Hospital Internal Medicine Clinic. The number of appointments during the six month time period scheduled to treat the patients' medical condition ranged from one to eight appointments per patient. A total of 65 appointments were scheduled and completed for the 29 patients at a total cost of $6007.30. The average cost of each appointment per MEPRS FY 1993 data (Table 2) was $92.42. There is no copayment or deductible involved for patients receiving medical care at Darnall Hospital.

One hundred thirty-two retirees and dependents of retirees and deceased retirees (77%) were informed that they could not obtain a medical appointment at Darnall Hospital and were referred to CHAMPUS providers. Of the 132 referred to CHAMPUS, 110 (or 83% of all priority 4 patients referred to CHAMPUS) did not seek medical care for their referred medical condition during the six month period. Seventeen patients (13%) made from one to five medical appointments through standard CHAMPUS providers

during the six month period for their medical conditions for a total of 39 appointments with the cost per appointment ranging from $2.88 to $856.76 and copayments per appointment ranging from $0.00 to $673.72. The 39 medical appointments with standard CHAMPUS providers reimbursed by CHAMPUS during the six month period totaled $4968.31, or an average cost of $127.39 per appointment. Copayments for the 39 medical appointments totaled $2720.58, or an average cost of $69.76 per appointment.

Five patients (4%) were referred to preferred providers. Preferred providers agree to provide medical treatment and accept a discount on the standard CHAMPUS allowable reimbursement rate for the services they provide. This network decreases CHAMPUS costs to Darnall Hospital. It also eliminates deductibles and

TABLE 5

Retiree/Retiree Dependent (Priority 4) Referrals

Number	Type	Visits	Total Cost	Average Cost	Total Copay	Average Copay
10	BAMC	*	$ 0.00	$ 0.00	$ 0.00	$ 0.00
29	Darnall	65	$6007.30	$ 92.42	$ 0.00	$ 0.00
132	CHAMPUS:					
		110	with no appointments			
17	Standard	39	$4968.31	$ 127.39	$2720.58	$ 69.76
5	PPN	7	$ 308.04	$ 44.01	$ 0.00	$ 0.00
22	Total CHAMPUS	46	$5276.35	$ 114.70	$2720.58	$ 59.14

* = Unknown number of BAMC appointments.

(Source: Triservice Patient Appointment System and Medical Analysis Support System, Darnall U.S. Army Hospital, Fort Hood, Texas 1994)

copayments that the beneficiary would be required to make under standard CHAMPUS. The five patients had a total of seven

preferred provider, CHAMPUS reimbursed medical appointments at a total cost of $308.04 with no copayments. All 22 CHAMPUS patients had a total of 46 medical appointments reimbursed by CHAMPUS for a total cost of $5276.35, or an average cost of medical appointments totaled $2720.58, or an average cost of $59.14 per appointment. The results are shown in Table 5 (p. 30).

(4) Cost/Benefit Analysis

Patients from both priority 2 and priority 4 groups were referred to BAMC, Darnall Hospital, and CHAMPUS in roughly the same proportions. In both cases (with outlier inclusive), Darnall Hospital provided referral services less expensively than standard CHAMPUS. Even with the outlier exclusive, the cost of standard CHAMPUS was nearly equal to the MEPRS cost.

Although there were only five patients who presented to partnership physicians, the average cost per visit was significantly lower than the MEPRS cost per visit. Perhaps more importantly, the lack of a copayment makes this option a more palatable one for patients who wish to be treated for their medical condition but do not wish to owe any out-of-pocket expenses.

The copayments were significant, and in light of the average copayments, it is not surprising that over 80% of both priority groups referred to CHAMPUS failed to seek medical care for their condition. The presence of a copayment appears to reduce the utilization of medical appointments.

Even though both groups were referred to Darnall Hospital in the same proportions, the priority 4 group had a significantly greater number of visits to the Internal Medicine Clinic. The proportion of priority 2 to priority 4 patients referred is less than the proportions of total patient visits to the Internal Medicine Clinic. This contradicts AR 40-3 priority for care guidance and denies access to the higher priority group of patients.

(3) Total Clinic Visits

Table 6 (p. 32) highlights the complete number of outpatient visits for the Internal Medicine Clinic each month by patient category. Priority 2 and 4 patients comprised almost three-fourths of the entire workload for the Internal Medicine Clinic.

TABLE 6
Internal Medicine Clinic
Total Number of Patient Visits by Priority Code

Priority	1	2	3	4	5	6	Others	Total
Month								
April	763	597	0	1879	0	1	1	3241
May	711	498	0	1501	1	2	1	2714
June	872	496	0	1542	0	2	0	2912
July	545	433	0	1121	2	0	4	2105
August	759	425	0	1394	2	1	1	2582
September	633	335	0	1056	2	0	1	2027
Total	4283	2784	0	8493	7	6	8	15581
Total number of Visits in Priorities 1, 2, and 4 = 15560								
Percentage	27.5%	17.9%		54.6%				

(Source: Triservice Patient Appointment System, Darnall U.S. Army Hospital, Fort Hood, Texas 1994)

(4) Internal Medicine Clinic No-Show Rates

The no-show rate for each month is listed in Table 7 (p. 33). No-show rates normally reported to the hospital command group are total number of no-shows divided by the total number of all appointments, which does not give an accurate no-show rate for appointed patients. These numbers are shown as well in the table.

Zero no-shows for the entire Department of Medicine were reported for the month of July 1993. Though this is theoretically possible, the number appears to be in error. Therefore, an expected no show number and rate was calculated by adding the total number of no-shows for the other five months divided by the total number of appointments for the other five

TABLE 7
No-Show Rate - Internal Medicine Clinic April to September 1993

Month	April	May	June	July	Aug	Sep
Total Visits	3244	2714	2913	2106	2583	2030
Total WI/TC	2220	1905	1976	1346	1742	1593
Total appts	1024	809	937	760	841	437
# no shows	124	77	114	80*	64	47
Normal % rate reported to command	3.8	2.8	3.9	0**	2.5	2.3
% No Show	12.1	9.5	12.2	10.5	7.6	10.8

* = Expected no show rate based on overall no show rate for the five months reported.
** = Zero no-shows reported for the month.

(Source: Triservice Patient Appointment System and the Internal Medicine Clinic, Darnall U.S. Army Hospital, Fort Hood, Texas 1994)

months. This percentage was multiplied by the number of appointed visits to determine the estimated number of no-shows for July. The true no-show rate for appointed patients is significantly higher that what was previously reported to the command group. Up to one-eighth of all appointed patients did not show for their appointments during the six month time period.

(5) Health Care Provider Productivity Workload

Each health care provider's productivity for each type of visit is shown in Appendix A, Tables 8 through 22 (pp. 48-62). Figure 2 denotes the type of appointment made and its respective code. To assist the reader in reviewing both productivity workload and reported hours, the provider's reported total hours are included in each productivity table. Detailed reported workload information is included in Appendices B and C, Tables 23 and 24 (pp. 63-67). The treatment Registered Nurse works full time only and does not treat appointed patients, so reported hours worked are not annotated. External consultants from BAMC are available one day per month, so their reported hours are also not annotated.

As a whole, clinic physicians demonstrated considerable workload in their reported hours worked, both in regular time and compensatory time earned. However, total clinic time for appointed and walk-in patients and telephone consults comprised a significantly small portion of their total reported working time spent. In some cases, physicians stated that they worked up to 300 hours in one month, but total clinic visits accounted for less than one-third of their duty time. Additionally, in most

Code	Appointment Name
ACON	Active duty 72 hour consult
ANEW	Active duty new patient
CHOL	Cholesterol screening
CLAS	Class
CON	72 hour consult
DCON	Dependent 72 hour consult
FLEX	Flex/rectal examination
MEB	Medical board
MTG	Meeting
NEW	New patient
NPC	New patient appointment
RFU	Return follow-up
SFU	Short lead return follow-up
TC	Telephone consult
TDRL	Temporary disability retirement list
TODY	Today consult
TTM	Thallium treadmill
WI	Walk-in patient
^TC	Telephone consult input by clinic
^WI	Walk-in patient input by clinic

(Source: Triservice Patient Appointment System, Darnall U.S. Army Hospital, Fort Hood, Texas 1994)

Fig. 2. Provider registration data

cases, clinic appointments (versus walk-ins and telephone consults) account for only one-third to one-half of all visits reported. In one case, total visits accounted for less than one-fifth of total time worked (physician #8, April 1993).

Although we cannot know for certain how long the average telephone consultation and average walk-in appointment takes, some providers have telephone consults templated for fifteen minutes; therefore, fifteen minutes was used for the telephone consult input by clinic (^TC). Walk-in patients may present to the Internal Medicine Clinic for medical problems, prescription refills, or medical advice. Because of this great degree of variability of walk-in patients, fifteen minutes was chosen as

the average time a walk-in patient input by clinic (^WI) should take.

It is surprising to note that the BAMC consultants in medical subspecialties need less time for a routine follow-up appointment (twenty minutes) than the internal medicine physicians do for primary care routine follow-ups (thirty minutes). The BAMC consultants saw, in some instances, more routine follow-ups in one day than internal medicine physicians saw for an entire month.

The nurse practitioners appeared to be more productive for the six month time period than their physician counterparts. The nurse practitioners averaged over 122 hours per month of productive clinical time, even with unavailable time each month. In some instances, the clinic time exceeded the reported time available. It is important to note, however, that nurse practitioners do not generally treat patients outside the clinic setting; nor do they take call. They also have a more limited scope of practice for the patients they treat. This is not to say, however, that their patients need less time per appointment than patients treated by an internal medicine physician. Nevertheless, nurse practitioner clinical productivity far exceeds that of their physician counterparts and they should be viewed as highly productive health care providers within the Internal Medicine Clinic.

(6) Health Care Provider Reported Workload

Health care provider reported workload for clinic physicians and nurse practitioners (Appendices B and C, Tables 23 - 24)

annotate the amount and type of available and unavailable time. Compensatory time earned is overtime worked in the clinic, on an inpatient ward, on-call time where the physician gets called in to the hospital or otherwise treats patients, or administrative time. On-call time that does not result in the physician getting called in to treat a patient is considered on-call time, not compensatory time earned. There were several physicians who did not report hours to the UCAPERS system. Routine, full-time hours were reported in their absence.

Nurse practitioner schedules only reflect available and unavailable time. Available time is generally Internal Medicine Clinic visit time. Unavailable time may include leave, holiday, administrative, and temporary duty time off.

(6) Health Care Provider Scheduled Hours

Internal Medicine Clinic physician schedules were reviewed to determine the duty location of available physicians each month during the six month time period. Physicians are normally scheduled to work in the Internal Medicine Clinic in the morning and afternoon, the Critical Care Unit (CCU), the Medical Ward when Emergency Medicine residents are present, and in the Internal Medicine Clinic as the walk-in physician. The walk-in physician, the CCU physician, and the ward physician are scheduled for a full day's duty in the respective position. Additionally, physicians may be scheduled for thallium treadmill testing (Tuesday and Wednesday mornings) or routine treadmill testing (Monday, Tuesday, Wednesday and Friday mornings) as well as Flex sigmoidoscopies (Monday and Wednesday afternoons).

Physicians may be unavailable for clinic visits due to the many reasons outlined in Appendix B, Table 23. Remaining physicians are scheduled to see patients in the morning, afternoon, or both.

One department of medicine physician pulls call each evening until the next duty day. The on-call physician is not generally scheduled patients the next day.

Thursday mornings are administrative duty time. The third Thursday morning of each month is reserved for the Department of Medicine Quality Improvement meeting. In both cases the clinic does not see medical patients during that time.

The number of physicians scheduled for morning and afternoon clinic varied from zero to five physicians. However, the months

TABLE 25
Average Number of Internal Medicine Clinic Physicians With Scheduled Morning and Afternoon Clinic Visits

Month	April	May	June	July	August	September
AM	2.3	1.5	2.0	1.5	2.9	1.1
PM	2.7	2.0	2.2	2.0	3.4	1.7

(Source: Department of Medicine, Darnall U.S. Army Hospital, Fort Hood, Texas 1994)

of May, July, and September had several days where no physician saw patients in morning or afternoon clinics. Table 25 (p. 38) denotes the average number of Internal Medicine Clinic physicians who were scheduled to treat appointed patients in morning and/or afternoon clinic. Note that Thursday mornings are not factored in as clinic available time.

CONCLUSIONS

Cost/Benefit Analysis

It appears that Darnall Hospital can provide needed referral services in a more cost-effective manner than standard CHAMPUS. However, the partnership physicians can provide needed health care referral services at a substantially lower cost to Darnall Hospital and, perhaps more importantly, with no copayment to the patient.

Arguably the most cost-effective means to provide needed health care services for patients referred from a PRIMUS clinic is to improve both the appointment system and the no-show rate. It can be argued that the cost of a missed appointment is significantly greater than the incremental cost of an additional patient visit between two scheduled patients. The additional cost in supplies and ancillary services is nominal when compared to the cost of physician time when they are not treating a patient. Furthermore, it is argued that any patient who is treated in a clinic setting is a cost in a capitated health care environment. However, a patient who requires medical treatment will be a cost in any health care setting. Therefore, it is imperative that patients are referred to the most cost-effective means to provide care.

Copayments for standard CHAMPUS provider services were remarkably high and appear to have a significant impact upon a patient's decision to pursue referral health treatment through standard CHAMPUS providers. With the advent of the DoD Region 6 managed care contract, copayments will become an integral part of

the military health care system and may impact on utilization rates for health care services. Priority 2 patients may demand greater access to military health care services over priority 4 patients. This pressure may become so great that priority 4 patients may lose most or all access to health care services within Darnall Hospital.

Utilization Review and Analysis

Internal Medicine Clinic physicians are reporting significant hours worked in several settings. However, the data demonstrate that a very small proportion of their time is spent treating appointed patients in the clinic. Conversely, nurse practitioners report a higher number of working hours and continuously demonstrated significantly higher levels of productivity than their physician counterparts.

A large number of patients are allowed access to Internal Medicine Clinic health care providers via telephone consultations and walk-in visits. In some ways, this "Laissez-faire" approach undermines the patient appointment system and allows some access to patients who are more persistent and demanding of health care services.

The templated appointment system appears to provide more than ample time to conduct several types of appointments. Although some appointments require a set amount of time (as in a treadmill test), many appointments can be changed to reflect a more realistic appointment system with the large workload and waiting list the Internal Medicine Clinic possesses.

One should be skeptical of the data collected on provider hours worked. There appears to be large discrepancies in reporting techniques with a bias toward overreporting hours worked. Although inpatient workload is not addressed in this study, it is doubtful that the vast majority of physician time is spent with inpatients.

Finally, there appears to be an inappropriate utilization of physicians in non-clinic settings. The high outpatient demand does not justify using full-time internal medicine physician support in inpatient settings such as the Critical Care Unit (CCU) or Medical Ward. The reason for having a physician full-time in the CCU and a full-time physician on the Medical Ward is unclear and not fully supported by the workload and schedule data in this study. There is also no apparent reason that the walk-in physician should be treating patients for a full duty day.

RECOMMENDATIONS

The first recommendation is to reexamine the need for a walk-in physician. Should this examination conclude that a walk-in physician is needed, his walk-in duty should be for weekday mornings only. The afternoon should be filled with appointed patients.

An alternative to the aforementioned recommendation is that the CCU physician double as the walk-in physician. There is no demonstrated continuous need for a full-time physician on either the CCU or the Medical Ward except for overseeing the Emergency Medicine resident training. The CCU physician should also be able to be the Medical Ward physician concurrently. The

CCU/Medical Ward physician can make morning and afternoon rounds with the residents, assist with patient examinations, determine appropriate treatments, and follow-up on examinations, treatments, and dispositions. This recommendation frees up two full-time physicians to treat Internal Medicine Clinic appointed patients.

The templated schedules should be examined immediately to determine more appropriate appointment times for the various appointment types. Additionally, per Greenfield's (1989) staff level matrix, the appointment mix may need to be changed to accommodate patients on the Internal Medicine Clinic waiting list.

A no-show appointment filling system should be implemented to avoid unused physician time. Walk-in patients could be used to fill in for those patients who miss their appointment. An on-call waiting list could be started with five patients called to present to the Internal Medicine Clinic at 0800 hours with a presumption that they would be seen before noon. The patients would be filled into late or missed appointments as they arise, with remaining patients being seen by the walk-in physician no later than noon if there are on-call patients remaining.

Telephone consults should be left for the final hour of the day so that they will not interfere with routine patient care. The treatment RN could follow-up on routine questions, test results, and any other matter that does not require a physician's time.

Reporting requirements need to be greatly improved. Reliable data on workload and provider time schedules greatly impacts on the average cost per visit to the Internal Medicine Clinic. Without reliable and valid data, it is very difficult to ascertain the true cost of performing needed services to the health care beneficiary population. The administrative officer and department chief must ensure that data is gathered correctly, efficiently, and reliably.

Referral to BAMC for health care services should be reviewed to determine whether it is being appropriately and sufficiently utilized for referred health care problems. Case management of potentially high-cost medical cases can be examined on an as-needed basis so that Darnall Hospital does not pay large CHAMPUS claims for patients who could have received similar services at BAMC.

Internal Medicine Clinic physician staffing policies need to be improved to ensure that adequate physician availability and coverage for outpatient clinic visits is consistent and continual.

The administrative officer for the Internal Medicine Clinic should be empowered to assist the clinic in monitoring clinician productivity, staffing, and scheduling. The current chain of command, however, may provide a disincentive to the administrative officer to correct any or all problems she identifies within the clinic. The clinic chief is the senior rater to the administrative officer and may view any actions the administrative officer takes to improve clinician productivity,

staffing, and scheduling, as being disloyal to the chief. I recommend that the chief of the department provide a letter of input (or in the alternative, be the intermediate rater) so that the administrative officer is allowed to be the "Honest broker" and work for the best interests of the organization as a whole.

Finally, Darnall Hospital should negotiate for a greater pool of partnership providers as a means to provide health care services to the beneficiary population only after improvements are made in increasing productivity within the Internal Medicine Clinic. The Department of Medicine chief and the Coordinated Care Division should plan and implement a strategy to work with local physicians to negotiate partnership agreements in the event that Darnall Hospital must refer patients to CHAMPUS providers.

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APPENDIX A

TABLE 8
Provider Productivity
April to September 1993
Physician #1

Appt	Minutes	April	May	June	July	Aug	September
ACON	40	1	2	0	3	0	0
ANEW	40	0	5	0	5	0	0
DCON	40	1	5	0	5	0	0
FLEX	60	3	0	3	3	0	0
MEB	60	0	2	2	0	2	0
NEW	30	1	0	7	6	6	0
RFU	30	5	5	22	12	19	0
SFU	20	4	9	23	6	25	0
TDRL	40	0	0	0	0	2	0
TODY	30	0	1	0	0	0	0
TTM	60	0	0	0	8	8	0
WI	15*	0	1	0	4	1	0
^TC	15*	7	23	35	7	8	10
^WI	15*	66	82	58	87	51	27
Total Visits		88	135	150	146	114	37
(In hours)							
Total Appt Time		8.67	16.25	27.12	31.67	32.42	0.00
Total ^TC Time		1.75	5.75	8.75	1.75	2.00	2.50
Total ^WI Time		16.5	20.5	14.5	21.75	12.75	6.75
Total Clinic Time		26.9	42.5	50.4	55.2	47.2	9.25
Total Reported Time		245	242	278	255	312	64

* = No set time given in template. Fifteen minutes estimated average time per visit.

(Source: Triservice Patient Appointment System and Uniform Chart of Accounts for Personnel, Darnall U.S. Army Hospital, Fort Hood, Texas 1994)

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TABLE 9
Provider Productivity
April to September 1993
Physician #2

Appt	Minutes	April	May	June	July	Aug	September
ACON	40	12	1	5	10	6	6
ANEW	40	19	5	12	14	12	8
DCON	40	8	3	10	11	12	10
FLEX	60	8	3	7	0	7	0
MEB	70	0	1	3	0	3	2
MTG	60	0	0	0	0	0	0
NEW	45	9	1	5	1	10	0
RFU	30	29	2	12	6	55	3
SFU	20	12	3	16	15	12	11
TODY	30	1	1	2	0	1	1
TTM	60	0	0	0	4	0	0
WI	15*	0	2	1	1	0	1
^TC	15*	57	53	90	102	77	69
^WI	15*	124	47	80	128	111	109
Total Visits		279	122	243	292	306	220
(In hours)							
Total Appt Time		59.75	13.92	44.83	36.33	70.0	24.25
Total ^TC Time		14.25	13.25	22.50	25.50	19.25	17.25
Total ^WI Time		31.00	11.75	20.00	32.00	27.75	27.25
Total Clinic Time		105.0	38.9	87.3	93.8	117.0	68.8
Total Reported Time		184	160	176	322	232	267

* = No set time given in template. Fifteen minutes estimated average time per visit.

(Source: Triservice Patient Appointment System and Uniform Chart of Accounts for Personnel, Darnall U.S. Army Hospital, Fort Hood, Texas 1994)

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TABLE 10
Provider Productivity
April to September 1993
Physician #3

Appt	Minutes	April	May	June	July	Aug	September
ACON	40	4	4	3	9	6	4
ANEW	40	10	7	16	15	13	8
DCON	40	6	6	9	11	12	9
FLEX	60	3	2	5	6	3	0
MEB	70	0	1	2	0	1	0
MTG	60	0	0	0	0	0	0
NEW	30	5	1	10	3	10	0
RFU	30	12	7	21	8	35	0
SFU	20	8	27	36	21	34	0
TODY	30	2	2	1	2	1	2
TTM	60	0	0	0	3	0	0
WI	15*	0	1	4	0	2	0
^TC	15*	28	40	72	22	63	19
^WI	15*	107	50	157	117	172	80
Total Visits Visits		185	148	336	217	352	122
(In hours)							
Total Appt Time		28.50	25.25	55.00	45.83	59.67	15.00
Total ^TC Time		7.00	10.00	18.00	5.50	15.75	4.75
Total ^WI Time		26.75	12.50	39.25	29.25	43.00	20.00
Total Clinic Time		62.25	47.75	112.3	80.58	118.4	39.75
Total Reported Time		176	160	318	223	291	149

* = No set time given in template. Fifteen minutes estimated average time per visit.

(Source: Triservice Patient Appointment System and Uniform Chart of Accounts for Personnel, Darnall U.S. Army Hospital, Fort Hood, Texas 1994)

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TABLE 11
Provider Productivity
April to September 1993
Physician #4

Appt	Minutes	April	May	June	July	Aug	September
ACON	40	7	5	4	0	2	3
ANEW	40	12	7	12	0	5	4
DCON	40	6	5	9	0	3	8
FLEX	60	6	2	3	0	0	0
MEB	70	0	0	3	0	2	0
MTG	60	0	0	0	0	0	0
NEW	30	10	0	6	0	2	3
RFU	30	43	1	21	0	8	24
SFU	20	31	7	32	0	5	26
TODY	30	2	2	4	0	1	1
^TC	15*	39	26	68	7	36	50
^WI	15*	168	65	150	14	71	113
Total Visits		325	120	312	21	135	232
(In hours)							
Total Appt Time		61.25	17.17	49.33	0.00	16.17	32.67
Total ^TC Time		9.75	6.50	17.00	1.75	9.00	12.50
Total ^WI Time		42.00	16.25	37.50	3.50	17.75	28.25
Total Clinic Time		113.0	39.92	103.8	5.25	42.92	73.42
Total Reported Time		176	160	176	16	112	88

* = No set time given in template. Fifteen minutes estimated average time per visit.

(Source: Triservice Patient Appointment System and Uniform Chart of Accounts for Personnel, Darnall U.S. Army Hospital, Fort Hood, Texas 1994)

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TABLE 12
Provider Productivity
April to September 1993
Physician #5

Appt	Minutes	April	May	June	July	Aug	September
ACON	30	9	7	0			
ANEW	30	13	10	0			
DCON	30	7	8	0			
MEB	60	0	5	0			
MTG	60	0	0	0			
NEW	30	8	7	0			
RFU	30	50	18	1			
SFU	20	36	47	4			
TODY	30	1	3	0			
^TC	15*	64	71	15			
^WI	15*	131	82	32			
Total Visits		326	272	54			
(In hours)							
Total Appt Time		62.25	55.17	2.33			
Total ^TC Time		16.00	17.75	3.75			
Total ^WI Time		32.75	20.50	8.00			
Total Clinic Time		111.0	93.42	14.08			
Total Reported Time		242	160	56			

* = No set time given in template. Fifteen minutes estimated average time per visit.

(Source: Triservice Patient Appointment System and Uniform Chart of Accounts for Personnel, Darnall U.S. Army Hospital, Fort Hood, Texas 1994)

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TABLE 13
Provider Productivity
April to September 1993
Physician #6

Appt	Minutes	April	May	June	July	Aug	September
ACON	40	8	8	6	9	10	2
ANEW	40	14	14	15	17	15	4
DCON	40	8	8	10	12	12	6
FLEX	60	6	0	0	0	3	0
MEB	70	0	1	2	1	2	0
MTG	60	0	0	0	0	0	0
NEW	30	12	1	7	4	4	10
RFU	30	33	4	16	13	34	0
SFU	20	17	17	16	15	49	0
TODY	30	0	1	3	4	1	0
TTM	60	0	0	0	2	3	0
WI	60	0	0	1	0	2	0
^TC	15*	21	45	45	53	39	23
^WI	15*	103	78	101	133	141	30
Total Visits		216	177	222	263	321	65
(In hours)							
Total Appt Time		54.17	29.83	41.58	44.00	72.33	8.00
Total ^TC Time		5.25	11.25	11.25	13.25	9.75	5.75
Total ^WI Time		25.75	19.50	25.25	33.25	35.25	7.50
Total Clinic Time		85.17	60.58	78.08	90.50	117.3	21.25
Total Reported Time		188	229	267	221	266	98

* = No set time given in template. Fifteen minutes estimated average time per visit.

(Source: Triservice Patient Appointment System and Uniform Chart of Accounts for Personnel, Darnall U.S. Army Hospital, Fort Hood, Texas 1994)

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TABLE 14
Provider Productivity
April to September 1993
Physician #7

Appt	Minutes	April	May	June	July	Aug	September
ACON	40	0	0	7	3	5	5
ANEW	40	0	0	13	3	10	8
DCON	40	0	0	10	8	9	3
FLEX	60	0	0	3	3	7	1
MEB	70	0	0	2	0	2	2
MTG	60	0	0	0	0	0	0
NEW	30	0	1	7	3	13	0
RFU	30	0	2	24	10	53	3
SFU	20	0	0	22	3	7	2
TODY	30	0	0	0	1	2	0
WI	1**	0	6	1	0	1	1
^TC	15*	10	13	31	22	16	13
^WI	15*	0	142	102	89	127	97
Total Visits		10	164	222	145	252	135
(In hours)							
Total Appt Time		0.00	3.00	32.92	18.83	61.92	16.42
Total ^TC Time		2.50	3.25	7.75	5.50	4.00	3.25
Total ^WI Time		0.00	35.50	25.50	22.25	31.75	24.25
Total Clinic Time		2.50	41.75	66.17	45.58	97.67	43.92
Total Reported Time		176	80	198	16	120	120

* = No set time given in template. Fifteen minutes estimated average time per visit.
** = Time given in template for scheduling purposes is one minute. Time is estimated at 15 minutes per visit.

(Source: Triservice Patient Appointment System and Uniform Chart of Accounts for Personnel, Darnall U.S. Army Hospital, Fort Hood, Texas 1994)

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TABLE 15
Provider Productivity
April to September 1993
Physician #8

Appt	Minutes	April	May	June	July	Aug	September
ACON	40	9	9	5	6	6	6
ANEW	30	12	14	11	9	14	7
DCON	40	3	3	1	0	4	2
FLEX	60	6	0	0	0	0	0
MEB	70	0	1	3	0	1	1
MTG	60	0	0	0	0	0	0
NEW	30	2	1	4	3	6	2
RFU	30	3	2	15	10	14	4
SFU	20	2	5	7	4	11	5
TC	15	0	0	1	0	0	0
TODY	30	2	0	0	0	2	2
WI	1**	1	1	0	0	0	0
^TC	15*	19	35	38	28	29	19
^WI	15*	104	53	78	45	109	68
Total Visits		157	124	163	105	196	116
(In hours)							
Total Appt Time		24.42	21.92	26.92	17.83	31.83	16.83
Total ^TC Time		4.75	8.75	9.50	7.00	7.25	4.75
Total ^WI Time		26.00	13.25	19.50	11.25	27.25	17.00
Total Clinic Time		57.16	43.90	55.92	36.08	66.33	38.58
Total Reported Time		300	243	296	171	174	100

* = No set time given in template. Fifteen minutes estimated average time per visit.
** = Time given in template for scheduling purposes is one minute. Time is estimated at 15 minutes per visit.

(Source: Triservice Patient Appointment System and Uniform Chart of Accounts for Personnel, Darnall U.S. Army Hospital, Fort Hood, Texas 1994)

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TABLE 16
Provider Productivity
April to September 1993
Physician #9

Appt	Minutes	April	May	June	July	Aug	September
ACON	40	10	8	2	0		
ANEW	40	14	15	3	0		
DCON	40	6	9	7	0		
FLEX	60	4	8	4	0		
MEB	60	0	0	2	0		
MTG	60	0	0	0	0		
NEW	30	9	5	12	0		
RFU	30	34	26	40	2		
SFU	20	47	43	41	4		
TODY	30	1	1	2	0		
WI	1**	0	1	0	0		
^TC	15*	31	11	1	0		
^WI	15*	242	212	103	13		
Total Visits		398	339	217	19		
(In hours)							
Total Appt Time		61.67	59.92	54.67	2.33		
Total ^TC Time		7.75	2.75	0.25	2.33		
Total ^WI Time		60.50	53.00	25.75	3.25		
Total Clinic Time		129.9	115.7	80.67	5.58		
Total Reported Time		176	160	176			

* = No set time given in template. Fifteen minutes estimated average time per visit.
** = Time given in template for scheduling purposes is one minute. Time is estimated at 15 minutes per visit.

(Source: Triservice Patient Appointment System and Uniform Chart of Accounts for Personnel, Darnall U.S. Army Hospital, Fort Hood, Texas 1994)

APPENDIX A

TABLE 17
Provider Productivity
April to September 1993
Nurse Practitioner #1

Appt	Minutes	April	May	June	July	Aug	September
CLAS	60	0	21	0	0	0	20
CON	60	0	1	0	0	0	0
NPC	45	23	15	23	27	15	20
RFU	30	96	72	82	90	51	64
^TC	15*	146	106	89	145	77	103
^WI	15*	125	104	70	110	114	200
Total Visits		390	322	264	372	257	409
(In hours)							
Total Appt Time		65.25	72.25	58.25	65.25	36.75	69.00
Total ^TC Time		36.50	26.50	22.25	36.25	19.25	25.75
Total ^WI Time		31.25	26.00	17.50	27.50	28.50	50.00
Total Clinic Time		133.0	124.8	98.00	129.0	84.50	144.8
Total Reported Time		160	152	160	168	120	152

* = No set time given in template. Fifteen minutes estimated average time per visit.

(Source: Triservice Patient Appointment System and Uniform Chart of Accounts for Personnel, Darnall U.S. Army Hospital, Fort Hood, Texas 1994)

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TABLE 18
Provider Productivity
April to September 1993
Nurse Practitioner #2

Appt	Minutes	April	May	June	July	Aug	September
CLAS	60	15	0	0	0	0	0
CON	60	0	9	0	0	0	0
NPC	45	1	5	3	0	0	0
RFU	30	154	91	37	0	0	0
^TC	15*	195	139	96	0	0	0
^WI	15*	219	114	58	0	0	0
Total Visits		584	358	194	0	0	0
(In hours)							
Total Appt Time		92.75	58.25	20.75			
Total ^TC Time		48.75	34.75	24.00			
Total ^WI Time		54.75	28.50	14.50			
Total Clinic Time		196.3	121.5	59.25			
Total Reported Time		176	136	149			

* = No set time given in template. Fifteen minutes estimated average time per visit.

(Source: Triservice Patient Appointment System and Uniform Chart of Accounts for Personnel, Darnall U.S. Army Hospital, Fort Hood, Texas 1994)

APPENDIX A

TABLE 19
Provider Productivity
April to September 1993
Nurse Practitioner #3

Appt	Minutes	April	May	June	July	Aug	September
CLAS	60	0	0	0	18	0	22
RFU	30	32	76	81	68	92	67
^TC	15*	15	56	130	100	173	191
^WI	15*	36	106	131	145	173	149
Total Visits		102	266	372	346	463	452
(In hours)							
Total Appt Time		35.00	66.00	70.50	67.00	71.00	78.50
Total ^TC Time		3.75	14.00	32.50	25.00	43.25	47.75
Total ^WI Time		9.00	26.50	32.75	36.25	43.25	37.25
Total Clinic Time		47.75	106.5	135.8	128.3	157.5	163.5
Total Reported Time		160	150	186	114	171	178

* = No set time given in template. Fifteen minutes estimated average time per visit.

(Source: Triservice Patient Appointment System and Uniform Chart of Accounts for Personnel, Darnall U.S. Army Hospital, Fort Hood, Texas 1994)

APPENDIX A

TABLE 20
Provider Productivity
April to September 1993
Treatment RN

Appt	Minutes	April	May	June	July	Aug	September
^TC	15*	0	0	2	23	1	62
^WI	15*	156	131	134	131	146	154
Total Visits		156	131	136	154	147	216
(In hours)							
Total ^TC Time		0.00	0.00	0.50	5.75	0.25	15.5
Total ^WI Time		39.00	32.75	33.50	32.75	36.50	38.50
Total Clinic Time		39.00	32.75	34.00	38.50	36.75	54.00

* = No set time given in template. Fifteen minutes estimated average time per visit.

(Source: Triservice Patient Appointment System, Darnall U.S. Army Hospital, Fort Hood, Texas 1994)

APPENDIX A

TABLE 21
Provider Productivity
April to September 1993
External Physician Consultant #1

Appt	Minutes	April	May	June	July	Aug	September
RFU	20	22	24	25	24	26	23
^WI	15*	6	4	3	2	4	3
Total Visits		28	28	28	26	30	26
(In hours)							
Total Appt Time		7.33	8.00	8.33	8.00	8.67	7.67
Total ^WI Time		1.50	1.00	0.75	0.50	1.00	0.75
Total Clinic Time		8.83	9.00	9.08	8.50	9.67	8.42

* = No set time given in template. Fifteen minutes estimated average time per visit.

(Source: Triservice Patient Appointment System, Darnall U.S. Army Hospital, Fort Hood, Texas 1994)

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TABLE 22
Provider Productivity
April to September 1993
External Physician Consultant #2

Appt	Minutes	April	May	June	July	Aug	September
RFU	20	0	0	0	0	8	0
^WI	15*	0	0	0	0	2	0
Total Visits		0	0	0	0	10	0
(In hours)							
Total Appt Time		0	0	0	0	4.00	0
Total ^WI Time		0	0	0	0	0.50	0
Total Clinic Time		0	0	0	0	4.50	0

* = No set time given in template. Fifteen minutes estimated average time per visit.

APPENDIX B

TABLE 23
Medical Clinic Physician Hours April to September 1993

Working (Available) Hours:
R = Regular hours
E = Compensatory time earned (worked)

Nonworking (Unavailable) Hours:
H = Holiday time
L = Leave/Vacation
T = Compensatory time taken
Y= Temporary duty

Reported Hours (No Impact Upon Available Time):
C = On call * = No report received. Normal hours assigned.

Month	April	May	June	July	Aug	Sep
Provider 1	R136	R152	R152	R124	R176	R64
	E109	E90	E126	E131	E136	E0
	L40		L24	L40		L40
			H8			Y64
						M8
						C64
Total Time Available	245	242	278	255	312	64

Month	April	May	June	July	Aug	Sep
Provider 2	R184	R160	R176	R168	R136	R144
	*	*	*	E154	E96	E123
					L44	L40
Total Time Available	184	160	176	322	232	267

(Source: Uniform Chart of Accounts for Personnel Physician Utilization/Survey Worksheet, Darnall U.S. Army Hospital, Fort Hood, Texas 1993)

APPENDIX B

TABLE 23
Medical Clinic Physician Hours April to September 1993

Working (Available) Hours:
R = Regular hours
E = Compensatory time earned (worked)

Nonworking (Unavailable) Hours:
H = Holiday time
L = Leave/Vacation
T = Compensatory time taken
Y= Temporary duty

Reported Hours (No Impact Upon Available Time):
C = On call * = No report received. Normal hours assigned.

Month	April	May	June	July	Aug	Sep
Provider 3	R176	R160	R168	R131	R172	R70
		*	E150	E92	E119	E79
			L8	L64		L40
				T3	T4	T3
						Y119
			C9			
Total Time	176	160	318	223	291	149

Month	April	May	June	July	Aug	Sep
Provider 4	R176	R160	R176	R16	R112	R88
	*	*	*		L40	L40
						T8
					Y16	Y24
					C54	C72
				X120		
Total Time Available	176	160	176	16	112	88

(Source: Uniform Chart of Accounts for Personnel Physician Utilization/Survey Worksheet, Darnall U.S. Army Hospital, Fort Hood, Texas 1993)

APPENDIX B

TABLE 23
Medical Clinic Physician Hours April to September 1993

Working (Available) Hours:
R = Regular hours
E = Compensatory time earned (worked)

Nonworking (Unavailable) Hours:
H = Holiday time
L = Leave/Vacation
T = Compensatory time taken
Y= Temporary duty

Reported Hours (No Impact Upon Available Time):
C = On call * = No report received. Normal hours assigned.

Month	April	May	June	July	Aug	Sep
Provider 5	R160	R160	R56			
	E82					
		H8				
Total Time Available	242	160	56			

Month	April	May	June	July	Aug	Sep
Provider 6	R136	R152	R176	R136	R168	R64
	E52	E77	E91	E85	E98	E34
		H8		H8		
	L40	L8		L32		L48
						Y64
			C89	C73		C56
Total Time	188	229	267	221	266	98

Month	April	May	June	July	Aug	Sep
Provider 7	R176	R80	R176	R16	R120	R120
			E22			
				L56	L56	L72
		C72	C72			
Total Time	176	80	198	16	120	120

(Source: Uniform Chart of Accounts for Personnel Physician Utilization/Survey Worksheet, Darnall U.S. Army Hospital, Fort Hood, Texas 1993)

APPENDIX B

TABLE 23
Medical Clinic Physician Hours April to September 1993

Working (Available) Hours:
R = Regular hours
E = Compensatory time earned (worked)

Nonworking (Unavailable) Hours:
H = Holiday time
L = Leave/Vacation
T = Compensatory time taken
Y= Temporary duty

Reported Hours (No Impact Upon Available Time):
C = On call * = No report received. Normal hours assigned.

Month	April	May	June	July	Aug	Sep
Provider 8	R176	R160	R176	R129	R120	R88
	E124	E83	E120	E42	E54	E12
				L45	L40	L80
				C45		C24
Total Time	300	243	296	171	174	100

Month	April	May	June	July	Aug	Sep
Provider 9	R176	R160	R176			
		H8				
		*				
Total Time Available	176	160	176			

(Source: Uniform Chart of Accounts for Personnel Physician Utilization/Survey Worksheet, Darnall U.S. Army Hospital, Fort Hood, Texas 1993)

APPENDIX C

TABLE 24
Medical Clinic Nurse Practitioner Hours April to September 1993

A = Available Time
N = Nonavailable Time

	April		May		June		July		Aug		Sep	
	A	N	A	N	A	N	A	N	A	N	A	N
1	160	24	152	0	160	24	168	0	120	72	152	0
2	176	0	136	16	149	24	PCS					
3	160	16	150	0	186	8	114	80	171	32	178	0

[Source: Uniform Chart of Accounts for Personnel, Darnall U.S. Army Hospital, Fort Hood, Texas 1993]